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SUBSTANTIAL TAKEOVER OF SHARES AND POST-ACQUISITION PERFORMANCE

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Abstracts
The corporate restructuring is used as mechanism to create value of the shareholders. It gives opportunity to make investment in other company with high potential but lower rate of return. By taking over such companies, the acquiring company redeems profit and creates value for their shareholders without diluting their right and altering main business operations. However, the value of acquired company shareholders is equally imperative as of acquiring company (Teece and Shuen, 1997), and (Coase, 1937). In present paper the performance of acquired company has been measured by taking three dimensions into account viz., actual return, estimated return and abnormal return. The beta coefficients of BSE-S&P 500 have been taken as proxy for return on estimation basis. To execute the hypotheses paired sample t-test, regression for estimation and cumulative abnormal return methods are applied. The study finds that the share price of acquired company remained low in pre-acquisition period and became a cause of acquisition, similar to Porter (1985), Thomas (1996), and Dewey (1961). Post-acquisition performance could not meet the standard of expected returns and stays lower in majority cases akin to Hogarty (1970), and Franks, Harris, and Titman, (1991). However, only in some instances abnormal return has been found positive after acquisition especially in long-run period.

Research paper

Keywords: *Post-Acquisitions, Expected Return, Cumulative Abnormal Return, Actual Return.*

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Introduction

Acquisition is an act of acquiring ownership in a property. In terms of corporate restructuring it accounts to purchase of controlling interest in the share capital of a company. The shares in a company could be purchased either from open market or with the mutual consent of the shareholders of acquiring company, or by private treaty. The act of acquisition, commonly, has a motivation which turns the deal in a specific arrangement viz., acquisition to amalgamate, acquisition for substantial voting power, or control. The pan-nation literature considers above said arrangements as synonym, but the prevailing laws in India make distinction among them e.g., corporate restructuring through amalgamation and merger is governed by Sections 232, 233, 234, and 237 of Chapter XV of the Companies Act, 2013. But, acquisition of shares, takeover, and control are, primarily, administered by Regulations 2011, of Security Exchange Board of India (SEBI) on Substantial Acquisition of Shares and Takeover (SAST).

The economic motivation of acquisition has two dimensions derived from the theory of firm i.e., cost-efficiency, and firm as nexus of contract. The cost efficiency could be achieved, through acquisition as an external corporate restructuring, by sharing of resources (Teece and Shuen, 1997; Radovic Markovic and Salamzadeh, 2012), or making external investment if it lead to innovation (Coase, 1937) or create synergy by remaining in the same field (Kumar, 2013a) where the post-deal results are greater than the sum of contributing parts (Robert and Lionel, 1967). The nexus approach focuses more directly on the institutional aspect and anticipates long-term contracts of the company which could be created through acquisition (Coad, 2009) and by creating market presence (Kumar, 2012b).

The incentive of mergers and acquisitions (M&A) differs on type, timing, and purpose of the deal. Besides that the expectations of shareholders, of both the companies, cannot be ignored which directly connected with value maximization. The value created through acquisition has a positive effect on the overall firm performance which in turn reflected in stock price movements and consequent returns (Jensen and Ruback, 1983; Knapp and Kronenberg, 2013; Azhar, 2015) and adhere to shareholders' expectations. Some issues related with above discussion have been addressed in the present study like is there any change in the market price of shares after acquisition, expectations of the shareholders, and abnormal returns?

Rational and hypothesis

Acquisition is an instrument of corporate growth strategy as an external restructuring. Henderson (1984) observed that the main objective of the growth strategy should be the real growth and increased rate of return to the stockholders. The real growth has two facets, first, increase in productive value of the company, and second, increase in rate of return to the stockholders (Robert and Terence, 1975). Hughes and Singh (1980) suggest the average return is the proper way to measure the effects of M&A on profitability comparing pre and post performance. Thus, the first proposition is set for the present study as follow.

H_0: There is no change in rate of return of the share price of acquired company in post-acquisition period in comparison of pre-acquisition period.

i.e., $R_{i(pre)} = R_{i(post)}$

H_a: The rate of return of in post acquisition period is increased in comparison of pre-acquisition period.

i.e., $R_{i(pre)} \neq R_{i(post),}$ *or,* $R_{i(pre)} \leq R_{i(post).}$

The performance of post-acquisition has been measured, in various studies, by either taking accounting results or market price of the share into account. The assessment of performance in relation to accounting results is constructive when the acquired company was privately controlled by acquiring company. Karen and Dennis (1989) argued that performance measures with market, industry and, economic effects', using abnormal returns rather than actual returns, helps to accomplish post-acquisition analysis. The disadvantages of employing actual returns are, the considerable difference in the average security betas (i.e., relative risk) among industries (Foster, 1978), and non-allowance of risk adjusted returns (Karen and Dennis, 1989). Zollo and Meier (2008) suggest that to assess short-term performance, one should refer market expectation as exogenous variable to firm performance. Thus, second hypothesis of the study is intended as follow.

H_0: The actual returns of the companies are not affected by market expectations, or there is no influence of market expectations on actual returns.

$R_i \neq f(\beta Mkt_i)$.

H_a: The actual returns of the companies are affected by market expectations.

$R_i = f(\beta Mkt_i)$.

It is evident from the above discussion that estimation of future return is much commendable as compare to average return. However, Jensen (1986) concludes that the post-outcome returns are unsettling because it

remains inconsistent with market efficiency and in turns overestimate the future efficiency gain from merger. The abnormal return covers two more dimensions of performance measurement, first, estimation of future return vis-à-vis industry comparison, and second, comparison of actual return and stakeholders expectations. The following proposition is laid down following above analogy.

H_o: There is no difference between abnormal return, expected return and actual return in post-acquisition period as compare to pre-acquisition period.

$$Ab_{Ri}=Ex_{Ri}=Ac_{Ri}=0$$

H_a: The actual return and expected return differs and contribute to abnormal return.

$$Ex_{Ri} \leq Ac_{Ri} \neq 0$$

Literature gives mix outcomes on the post-acquisition performance like Porter (1985), Salinger (1992), and Thomas (1996) have made post-acquisition assessment and found improved performance. On the contrary, Dewey (1961) argued that most mergers have virtually nothing to do with either the creation of market power or the realization of scale economies. The Hogarty's review (1970) explained that the results during last fifty years show overwhelmingly that takeovers have had a neutral or negative effect on profitability. The outcome of acquired firms had below average stock market performance prior to their acquisition (Mandelker, 1974), (Langetieg, 1978), and (Franks, Harris, and Titman, 1991).

A group of studies have examined short-term and long-term performance e.g., Mitchell and Stafford (2000), and Ikenberry et.al. (2000) reported that there is negative abnormal monthly return. The studies docu-

ment negative abnormal returns over the three to five years following overwhelm positive abnormal returns over short-term period, making the net worth effect negative (Andrade et. al., 2001), and (Paul et. al., 2004).

Research methodology

SEBI provides database which primarily discloses acquisitions on the basis of percentage of shares acquired by a company/ individual/ institution in Target Company. A sample of companies has been retrieved from the SAST database for the financial year 2011-12 from the website of SEBI those made announcement on acquisition for amalgamation. The companies reported their acquisition under 7(1), and 7(3) of SEBI (SAST) regulation, 2011have been taken into present study. The sample again refined on the basis of total percentage of share in Target Company after making communication under above said regulation. The selected companies which have more than 25 percent share in Target Company are considered. The amended sample size is of 45 companies.

The closing share price of respective companies has been retrieved from the BSE website i.e., www.bseindia.com . The range of data is primarily covers 400 days, 200 days to pre-acquisition and 200 days after post-acquisition. The day on which announcement was made has taken as zero period, thus data ranges from -200 to 0 to +200 days. The data, thereafter, clustered according to duration of performance viz., 10 days, 30 days, 60 days, 120 days, and 200 days. The market price of the share of respected companies has been considered as key variable to make analysis of post-acquisition performance. The above said postulates regarding post-

acquisition performance on the basis of actual market price of share is expressed as follow:

$$AR_{post\text{-}acquisition} \geq AR_{pre\text{-}acquisition} \quad (1)$$

$$\text{Observed Difference Mean} = \sum_{i=-t}^{0} AR_{i(PRE)} - \sum_{i=0}^{+t} AR_{i(POST)} \quad (2)$$

Where,

$AR_{i(PRE)}$ *= Actual market price of the shares of each company changed in pre-acquisition periods varies from –t say 10 days prior to acquisition till the date of acquisition.*

$AR_{i(POST)}$ *= Actual market price of shares of each company changed in post-acquisition periods varies from the date of acquisition till last day of sample i.e., +t say 10 days after acquisition.*

t= varies according to criterion of performance measurement on days basis viz., 10, 30, 60, 120, and 200 days.

It is evident that expected market return plays vital role to arrive at abnormal return which confers true profitability of the shareholders. The abnormal return is the actual returns in excess of expected returns as presented below:

Abnormal Return = Actual Returns – Expected Returns (3).

$Ab_R = Ac_R - Ex_R$

To measure expected returns, BSE-S&P 500 has been taken as proxy. The change in index value shows varying expectation of the shareholders in Target Company. Any positive change in index leads to increase in their expectation in respect of their own shares and vice-a-versa. It means the actual returns of the companies depend upon the performance of index (proxy) movement of BSE-S&P 500 (let say Y, as an independent

variable). Thus, expected return (let say X, as a dependent variable) could be reiterated as follow:

$$X_i = \alpha_i + \beta Y_i + \varepsilon_I \qquad (4)$$

Where,

X_i *is the expected return of every company of given sample,*

Y_i *is the index performance in respect of time when company announced acquisition,*

α *is the intercept of the regression equation,*

β *is the coefficient of the endogenous variable, and*

ε *is the standard error.*

The regression for all sample companies has been calculated separately as their date of announcement and respective dates of proxy variables varies. Thus, abnormal return for a company calculated in equation (3) with the help of equation (1) and (4) defined as

$$Ab_{Rt} = \frac{1}{N}\sum_{i=1}^{N} ar_{in} \qquad (5)$$

Where,

N is the number of companies in sample i.e., 45. The total abnormal returns that are then aggregated into average total abnormal return for sample is defined as follow:

$$TAR_t = \frac{1}{N}\sum_{i=1}^{N} tar_{in} = \frac{1}{N}\sum_{i=1}^{N} \sum_{i=-t}^{+t} ar_{in} \qquad (6)$$

Where,

the accumulation process begins at the time of –t, comprises daily abnormal returns, up to and including day +t, and N is the number of companies in the sample.

Empirical results

The results of comparative actual return during pre and post acquisition has been ascertained by applying paired-sample t-test and presented in Table 1. To compute estimated return, regression has been executed by taking proxy as endogenous variable and change in actual return as exogenous variable, and results are given in Table 2. The excess of actual return over expected return termed as abnormal return and outcome has been explained in Table 3.

Table 1. *Results of Share Price Performance*[#]

Duration of Performance Measurement	***Pre-Acquisition Mean (1)***	***Post-Acquisition Mean (2)***	***Observed Difference Mean (3) = (2) - (1)***	***t-statistic (p-value)***
10 days	*105.628*	*111.040*	*5.412*	***2.420 (0.010)*****
30 days	*104.223*	*114.732*	*10.509*	***2.846 (0.003)****
60 days	*101.000*	*117.463*	*16.463*	***3.094 (0.002)****
100 days	*101.197*	*118.466*	*17.269*	***2.267 (0.014)*****
200 days	*102.816*	*153.437*	*50.621*	***1.994 (0.026)*****

 # Results are computed by applying paired sample-test.

Values given in parentheses are p-values

**Values are significant at 0.01 level.*

***Values are significant at 0.05 level.*

Table 1 states the result of paired sample t-test of actual changes in market price of the shares in target companies during different time criterion. The mean value of pre-ten days to acquisition is 105.628, and post-ten

days to acquisition is 111.040 shows that there is increased in the market price of the shares of target company by mean value 5.412 as stated in observed difference mean. The t-test value, 2.420, is significant at level of 0.05. The significant t-value suggests not to accept null hypothesis i.e., there is no change in market price of the companies after acquisition. The results are similar on all above time criterion, and it is evident that the actual market value of the shares of target companies has been increased during post-acquisition period.

Table 2. *Results of Expected Rate of Market Return*

Performance in Group of Days	***Pre and Post Announcement Days***	***Intercept {αi}***	***Coefficients {βi} [Standard Error] {εi}***	***t-value {βi /εi} (p-value)***
-10 to +10 Days	*-10 to 0 days*	*-0.099*	*-0.0206 [0.10084]*	*-0.2044 (0.843)*
	0 to +10 days	*-0.1457*	*0.1215 [0.1247]*	*0.9747 (0.3582)*
	-10 to +10 Days	*-0.1011*	*0.0430 [0.0749]*	*0.5611 (0.5812)*
-30 to +30 Days	*-30 to 0 days*	*0.0461*	*-0.2045 [0.0959]*	*-2.1319 (0.0419)*
	0 to +30 days	*0.1296*	*-0.1199 [0.0696]*	*-1.7231 (0.0958)*
	-30 to + 30 Days	*0.0745*	*-0.16138 [0.0577]*	*-2.7933 (0.0070)*
-60 to + 60 Days	*-60 to 0 Days*	*-0.1329*	*0.036 [0.0515]*	*0.7054 (0.4833)*
	0 to +60 Days	*0.0577*	*-0.1193 [0.050]*	*-2.3838 (0.0204)*
	-60 to + 60 Days	*0.045*	*-0.1236 [0.0411]*	*-3.004 (0.0032)*
-120 to +120 Days	*-120 to 0 days*	*-0.120*	*0.0280 [0.0404]*	*0.6934 (0.4894)*
	0 to 120 days	*-0.040*	*0.0662 [0.0383]*	*1.7290 (0.0864)*
	-120 to +120 days	*0.0365*	*-0.0876 [0.0270]*	*-3.236 (0.0013)*
-200 to +200 Days	*-200 to 0 days*	*0.0188*	*-0.1164 [0.036]*	*-3.227 (0.0014)*
	0 to 200 days	*-0.015*	*0.0262 [0.0274]*	*0.9571 (0.3396)*
	-200 to +120 days	*0.0213*	*0.0654 [0.0242]*	*2.6973 (0.0072)*

values within [ ] parentheses are standard error

values within ( ) parentheses are p-value of the t-test.

**values are significant at 0.01 level.*

***values are significant at 0.05 level.*

***values are significant at 0.10 level.*

Table 2 presents the estimates of expected market return of shares in Target Company. It shows coefficient during pre-ten days is -0.0206 and intercept is -0.099. It indicates that the pre-acquisition performance was lower than expected return and there was inverse relation between the performance of stock-market and share price of the Target Company. However, the test-value is not significant for 10 days basis criterion. Up to thirty days prior to acquisition, the coefficient is -0.2045 which is significant at level of 0.05. The negative sign of the coefficient signifies that the expected return of the share substantially declined during this period. Similar results have been found afterwards also. On the basis of sixty days criterion, the expected results were low during post-acquisition and overall period as well. However, the expected returns were achieved significantly during post-acquisition period on the criterion of 120 days. The outcome of expected return on 200 days after acquisition is positive but not found significant.

Table 3. *Cumulative Abnormal Return (in percentage)*

Cumulative Abnormal Return	***Pre- Acquisition***	***Post-Acquisition***	***Overall****
On 10 days basis	*-3.343 (-0.3343)*	*-3.38 (-0.338)*	*-6.78 (-0.678)*
On 30 days basis	*-15.55 (-0.51833)*	*-11.42 (-0.380)*	*-22.87 (-0.762)*
On 60 days basis	*-28.43 (-0.47383)*	*-23.34 (-0.389)*	*-54.62 (-0.910)*
On 120 days basis	*-61.73 (-0.51442)*	*-52.30 (-0.435)*	*-114.39 (-0.953)*

On 200 days basis	*-26.30 (-0.1315)*	*13.37 (0.066)*	*-13.42 (-0.067)*

( ) values in parentheses are average of abnormal return of different duration.

**overall weighted means starting from pre-acquisition to post-acquisition e.g., -10 to +10*

Table 3 reveals cumulative abnormal return in percentage. It is evident from Table 3 that the abnormal return during pre-acquisition period, irrespective of time criterion, has been negative which means that the expected market return was high as compare to actual return. The results are similar in post-acquisition period except abnormal return in case of 200 days. The expected return on the basis of 120 days was positive as given in Table 2 but the intercept was negative which impose negative effect on abnormal return.

Conclusion

The value maximization is the decisive intention of corporate restructuring especially through acquisitions for amalgamation. It has been investigated that the actual returns of the sample companies have been increased across the distinct duration ranges from 10 days to 200 days. It emphasized that the shares of individual companies have been traded at high value as compared to pre-acquisition value as supported by significant results. The market return as the basis of expected results gives varied outcomes Porter (1985), and Thomas (1996). There is no improvement has been found in post-acquisition period during ten days across the acquisition or the performance remained same as in pre-acquisition period, the results are approximating to Dewey (1961). There is significant decline in the perform-

ance, as suggested by negative value of coefficient, pre-30, pre-120, and pre-200 days' performance which leads to turn down post-acquisition performance. The negative coefficient, for post-30, and post-60 days, results are confirmed with outcomes of Mitchell and Stafford (2000). However, after 120 days of acquisition, performance has been found positively significant and substantiate the findings of (Andrade, 2001), and (Paul, 2004).

It has been observed that the average cumulative return remain negative during across the period except post-200 days. It is apparent from that acquired company has not achieved expected rate of returns or valued below than average value of market stock in similar industry. It is been noticed that the sample companies' overall performance was also low from 10 to 120 days except 200 days where it has positive and significant results which could have been one of the causes of acquisition where company in its individual functioning has been performing well but lower than the market expectations which attracted the acquiring company make such acquisition.

References

1. *Andrade, G., M. Mitchell, & E. Stafford. (2001). New evidence and perspectives on merger. Journal of Economic Perspectives, 15, 103-120.*
2. *Azhar, S. (2015). Impact of liquidity and Management Efficiency on profitability: An Empirical Study of Selected Power Distribution Utilities in India. Journal of Entrepreneurship, Business and Economics, 3(1), 82-97.*
3. *Coad, Alex. (2009). The growth of firms, UK: Edward Elgar, 124-25.*
4. *Coase, R.H. (1937). The nature of the firm. Economica, New Series, 4(16) (November), 386-405.*
5. *Donald, Dewey. (1961). Mergers and cartels: some reservations about policy, Market Economic Review, LI (May), 257.*

6. *Foster, G. (1978). Financial statement analysis, NJ: Prentice-Hall, Englewood Cliffs. Karen & Dennis, Ibid.*
7. *Franks, Julian R., Robert, S. Harris, & Sheriden Titman. (1991). The post merger share price performance of acquiring firm, Journal of Financial Economics, 29, 81-96.*
8. *Henderson, Gleenn V. (Jr.), Trennpohl, Gray L., & Wert, James E. (1984). An introduction to financial management, Canada: Addison-wesley publishing company, 501-518.*
9. *Hogary, T.F. (1970). Profits from mergers: the evidence of 50 years. St. John's Law Review, 44, spring special edition, 378-91.*
10. *Hughes, A. & Singh, A. (1980). Mergers, concentration and competition in advanced capitalist economies: an international comparison, in eds., Mueller, D.C., the determinants and effects of mergers, Cambridge, Mass.: Oelgeschlager, Gunn & Hain, 1-26.*
11. *Ikenberry, D., J. Lakonishok, & T. Wemaelen. (2000). Tock repurchases in Canada: performance and strategic trading, Journal of Financial, 55, 2373-2397.*
12. *Jensen, M.C. & Ruback, R.S. (1983). The market for corporate control. Journal of Financial Economics, 11 (1-4), 5-50.*
13. *Jensen, Michael C.(1986). Agency Cost of free cash flow, corporate finance and takeovers, American Economic Review, 76, 323-329.*
14. *Karen L. Fowler, & Dennis R. Schmidt. (1989). Determinants of tender offer post-acquisition financial performance. Strategic Management Journal,50(4) (July- Aug), 339-350.*
15. *Knapp, J. L., & Kronenberg, C. (2013). Strategic Analysis of SMEs' early Internationalisation Processes. Journal of Entrepreneurship, Business and Economics, 1(1/2).*
16. *Kumar, Sunil. (2012). Post-mergers and acquisitions strategies to create shareholders value: agency problem and governance. Asia Pacific Journal of Research in Business Management, 3(10) (November), 78-92.*
17. *Kumar, Sunil. (2013). Corporate restructuring through mergers and acquisitions: trends and types in India. International Journal of Trade and Global Business Perspectives, 2(3), 532- 540.*
18. *Langetieg, Terence C. (1978). An application of a three-factor performance index to measure stockholders gains from merger, Journal of Financial Economics, 6, 365-383.*
19. *Mandelker, Gershon. (1974). Risk and returns: the case of merging firms, Journal of Financial Econometrics, 1(Dec.), 303-335.*
20. *Mitchell, M.L. & E. Stafford. (2000). Managerial decision and long-term performance. Journal of Business, 73, 287-320.*

21. *Paul Andre, Maher Kooli, & Jean. Francois L'Her. (2004). The long-run performance of mergers and acquisitions: evidence from Canadian stock market, Financial Management, 33(4) (Winter), 27-43.*

22. *Porter, Michael E. (1987). From competitive advantage to corporate strategy. Harvard Business Review, 65(3), 43-59.*

23. *Radovic Markovic, M., & Salamzadeh, A. (2012). The Nature of Entrepreneurship: Entrepreneurs and Entrepreneurial Activities. LAP LAMBERT Academic Publishing.*

24. *Robert W. Ackerman & Lionel L. Fray. Financial evaluation of a potential acquisition, financial executive, XXXV, October, 1967, (in edt) Arthur R. Wyatt & Donald E. Kieso, Business combinations: planning and action, Scranton: International Textbook Company, 1969, ch. 2.*

25. *Robert, A. Hangen, & Terence, C. Langetieg (1975). An empirical test for synergism in mergers. The Journal of Finance, 30(4), 1003-1014.*

26. *Salinger, M. (1992). Standard errors in event studies, Journal of Financial and Quantitative Analysis, 27, 39-53.*

27. *Teece, D.J., G. Pisano & A. Shuen (1997). Dynamic capabilities and strategic management. Strategic Management Journal, 18, 509-33*

28. *Thomas H. Brush. (1996). Predicted change in operation synergy and post-acquisition performance of acquired business. Strategic Management Journal, 17(1) (Jan), 1-24.*

29. *Zollo, Maurizio, & Meier, Degenhard. (2008). What is M&A performance? Academy of Management Perspectives, 22(3) (Aug.), 55-77.*